**In-class activity 1:** The City of Fort Wayne has identified countermeasures for application at intersection 2 (Four leg intersection with minor road stop control,$ AADT\_{major}=23,553 and AADT\_{minor}=1,758$). Selected countermeasure was identified as *Install a Roundabout*. What are the benefits and costs associated with this countermeasure? *(Answer:* ***$14 Million****)* Use following information:

* CMF of a roundabout in place of a TWSC intersection: 0.56 (total crashes) and 0.18 (Fatal and Injury crashes)
* Service life 10 years.
* Annual traffic growth 1.5%
* Discount rate 4%

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**Formula to convert uniform annual benefits to a present value**

$\left(A, i,y\right)=\frac{\left(1+i\right)^{y}-1 }{i\*\left(1+i\right)^{y} } $ Where $i$ = discount rate, $y$= year in the service life of the countermeasure

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**In-class Activity 2:** The City of Fort Wayne has identified safety countermeasures, benefits and costs for the intersections and segments shown in table below. Which safety improvement projects would be selected based on ranking the projects by cost-effectiveness, net present value and Benefit-cost ratio (BCR) measures?

